

Park, Chae

From: Aylward, Michelle J CIV PSNS, 106 <michelle.aylward@navy.mil>
Sent: Thursday, December 03, 2015 4:00 PM
To: Park, Chae
Cc: Keeley, Karen; Thurman, Anthony M CIV PSNS/IMF, Code 106; Brown, Ellen CIV NAVFAC NW
Subject: RE: Fire Main Pipe Break
Attachments: water discharge map.pdf

Good evening,

To answer your questions:

1. PSNS & IMF estimates that 2.5 million gallons of water was discharged to the bay during this event. Specifically 1.56 million gallons were discharged from dry dock outfalls 018B and 018A, 600,000 gallons from a back-up pump and 340,000 gallons from the storm drain system. The following explains how the volume of water discharged was determined:

The majority of the release (80%) was discharge to the bay through outfalls 018 and 018A. Pumps operated continuously for approximately 2 hours to return wetwell levels to normal conditions. The two pumps (one from each pumpwell) each delivers approximately 6500 gallons per minute (gpm). A diesel driven back-up pump in DD4 was also used for approximately 2 hours to assist. The diesel back-up pump delivers approximately 5000 gpm. Therefore it is estimated that 2.16 million gallons were discharged through the dry dock outfalls and over the caisson (via the diesel back-up pump). There would be a small amount discharged through the storm drain system along the east and north side of dry dock 4 (340,000 gallons).

2. Outfall 018 discharges at the south west corner of dry dock 4 and 018A discharges under pier 3 located south west of dry dock 4. The storm drain along the east and north sides of dry dock 4 drain south to the bay. The location of the pipe rupture was in the north east area top side of dry dock 4 about 20 feet away from the edge of the dry dock. Please see attached map for visual.

3. Yes, 5 cubic yards it what is estimated to have been lost to the bay. The personnel that fixed the sink hole used 20 cubic yards of fill. I was told that due to compaction during placement an extra 5 cubic yards was needed so we only lost 15 cubic yards from the rupture. There is an abandoned steam trench (near the salt water main break location) that is filled with soil accounting for about 9 yards. The trench is about 4 feet deep, 2 feet wide, and 40 to 50 feet long. The plan is to seal up this steam trench leaving the soil in place. The water that flowed top side around dry dock 4 had soil that settled out and was cleaned up during the repairs as well. The water and soil that overflowed into the dry dock caused standing water on the dry dock floor. The heavier fraction of the soil settled out on the dry dock floor, in the sand trap and channels that outline the dry dock. From the dry dock the water would flow to the wet well in the pump well before pumped to the bay. A small amount of soil would be expected to settle out into the wet well during this time and the suction from the pumps does not pull from the bottom of the wet well. In summary 15 cubic yards were lost from the rupture, 9 settled out in the trench top side (will be sealed in place), 1 settled out in the dry dock (has been cleaned up and removed) and 5 were lost to the bay.

4. Under the NPDES program and to the best of my knowledge no human health or ecological risk evaluations were performed.

5. An equipment failure of the uninterrupted power supply (UPS) was the root cause of the pipe failure. The failure of the UPS lead to the activation of additional pumps which generated a hydraulic shock wave causing the pipe to rupture. An automatic transfer switch, that gives redundancy to the UPS, will be installed, January - February time frame, to ensure there is no future reoccurrence.

Sincerely,
Michelle

Michelle Aylward
NPDES Program Manager
Code 106.32
Work: (360) 476-0118
Cell: (360) 535-2898

-----Original Message-----

From: Park, Chae [mailto:Park.Chae@epa.gov]
Sent: Wednesday, December 02, 2015 10:56 AM
To: Aylward, Michelle J CIV PSNS, 106
Cc: Keeley, Karen
Subject: [Non-DoD Source] RE: Fire Main Pipe Break

Ms. Aylward, thank you for taking the time to provide with me with this information. Myself and Karen Keeley (EPA Superfund) have reviewed it and we have the following questions.

1. From eye witness account, there may have been millions of gallons of water that breached the pipe and entered the dry dock and the nearby catch basin. Can you discuss the amount of water and where the water and soil associated with that breach went? From our discussion, it appears the water went into the bay. Please discuss different ways and locations it went into the bay.

2. Superfund samples the Sinclair and needs to know the areas of disturbance. If possible, please provide us in a map where the catch basin and the pipe that breached are located as well as any other areas where the water may have entered the bay.

3. How was the estimate of 5 cubic yards calculated? Also, by 5 cubic yard, can we assume that references the volume of soil lost to the bay?

4. Has the Navy conducted any human health or ecological risk evaluation associated with the soil that was discharged into Sinclair beyond the TCLP test results you shared?

5. Please also discuss any corrective actions taken to prevent this incident from reoccurring.

I am copying Karen Keeley in this email bcz Karen has an interest in this incident as part of her cleanup efforts. Please reply to both of us. Thank

you Ms. Aylward.

Karen, if you have anything to add, please do so.

Chae

-----Original Message-----

From: Aylward, Michelle J CIV PSNS, 106 [mailto:michelle.aylward@navy.mil]

Sent: Tuesday, December 01, 2015 3:33 PM

To: Park, Chae <Park.Chae@epa.gov>

Cc: Thurman, Anthony M CIV PSNS/IMF, Code 106 <anthony.m.thurman@navy.mil>

Subject: Fire Main Pipe Break

Good afternoon Mr. Park,

On October 30th 2015 a salt water system pipe broke releasing salt water into dry dock 4 and along the road. This was water piped from the bay to be used for fire protection and noncontact cooling water that would eventually be returned to the bay. This underground pipe caused a sink hole as soil was displaced from under the cement. It is estimated that 5 cubic yards were lost to the bay.

It was decided that this was non-reportable per NPDES permit WA-000206-2 based on soil samples that had been taken from the area in the past few years. The data came from soil samples taken for waste designation and disposal after wells were drilled to classify the soil structure surrounding dry dock 4. Please see the attached map of where the wells were drilled along with the sink hole location, analytical sample results, chain of custody and the field sampling form. The soil was designated as nonhazardous. Please contact me if you have further questions.

Sincerely,
Michelle Aylward

NPDES Program Manager

Code 106.32

Work: (360) 476-0118

Cell: (360) 535-2898



DEPARTMENT OF THE NAVY

PUGET SOUND NAVAL SHIPYARD
AND INTERMEDIATE MAINTENANCE FACILITY
1400 FARRAGUT AVENUE
BREMERTON, WASHINGTON 98314-5001

IN REPLY REFER TO

5090

Ser 106.32/0208

SEP 07 2012

U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101
Attention: OCE-133



Ladies and Gentlemen:

This letter provides Puget Sound Naval Shipyard and Intermediate Maintenance Facility's (PSNS & IMF's) Discharge Monitoring Reports (DMRs) required under the National Pollutant Discharge Elimination System (NPDES) Permit Number WA-000206-2 for the month of August 2012. The DMRs are attached.

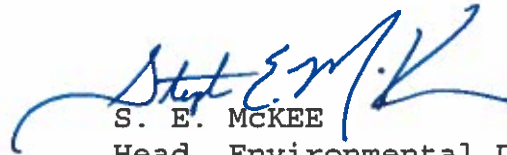
There was one daily maximum loading exceedance for copper from Outfall 019 which resulted in a monthly average loading exceedance. The concentration of the samples taken from Outfall 019 did not exceed the permit limits. The reason for the loading exceedances is due to the high cooling water discharge from the aircraft carrier. When our permit loading limits were calculated in the early 1990's, we discharged 5.24 million gallons per day from Outfall 019, which included relief water, ship's cooling water, and all other sources. Due to the increase in technology onboard, carriers' cooling water, relief water, and all other sources now discharge between 10-13 million gallons of water per day from the outfall. As a result, compliance with our concentration limits does not result in compliance with our loading limit. Because the loading limit was calculated as a direct product of the average volume discharged and the concentration limits, our concentration limits have in effect been cut by more than half.

No production work that would significantly contribute copper was performed during the month. History indicates that cooling water is not a significant source of copper. The high volume of cooling water discharges from aircraft carriers were addressed in our updated permit application.

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Ser 106.32/0208

Questions or comments regarding this information may be addressed to Ms. Christine Gebhart, Code 106.32, at (360)476-9679.

A handwritten signature in blue ink, appearing to read "S. E. McKee", is written over the printed name.

S. E. MCKEE
Head, Environmental Division
Environment, Safety, and
Health Office
By direction of the Commander

Enclosure: 1. Discharge Monitoring Reports for August 2012

Copy to: WDOE NWRO (Water Quality Section)

DISCHARGE MONITORING REPORTS FOR AUGUST 2012

Enclosure (1)



DISCHARGE MONITORING REPORT
ATTACHMENT 1
PERMIT NUMBER WA-000206-2
MONITORING PERIOD August 2012

Parameter	PQL	Lowest Calibration Concentration	Results Below PQL, Outfalls:			
			018A/B	019A	096A	021A
Copper	10 ug/l	10 ug/l	1 of 4	0 of 4	*	N/A
Oil and Grease	5 mg/l	-----	4 of 4	4 of 4	*	31 of 31
Total Suspended Solids	4 mg/l	-----	N/A	N/A	N/A	14 of 14

NOTE: PQL - Practical Quantification Limit
N/A - Not Applicable
* No samples were collected at this outfall during the month